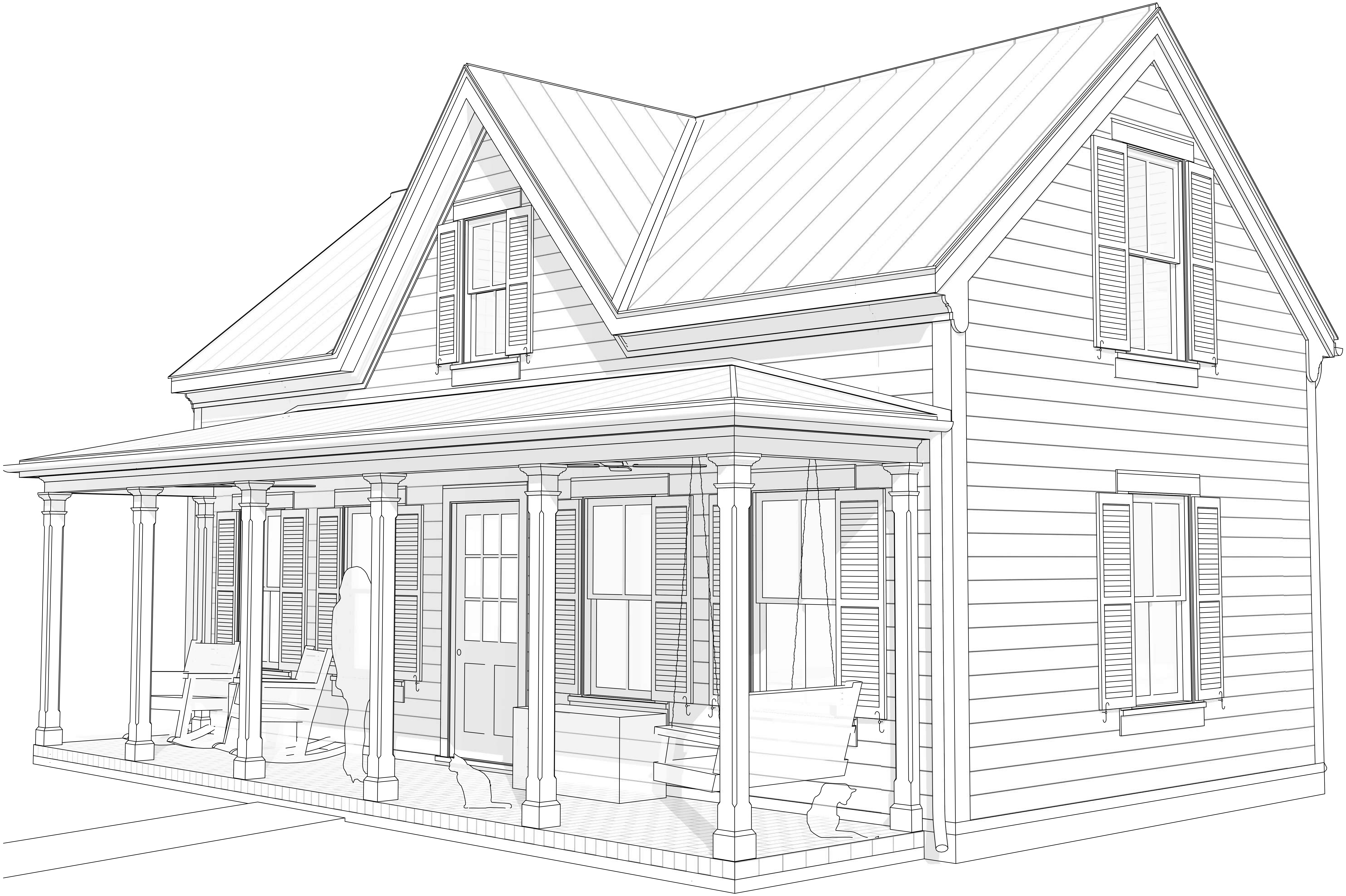


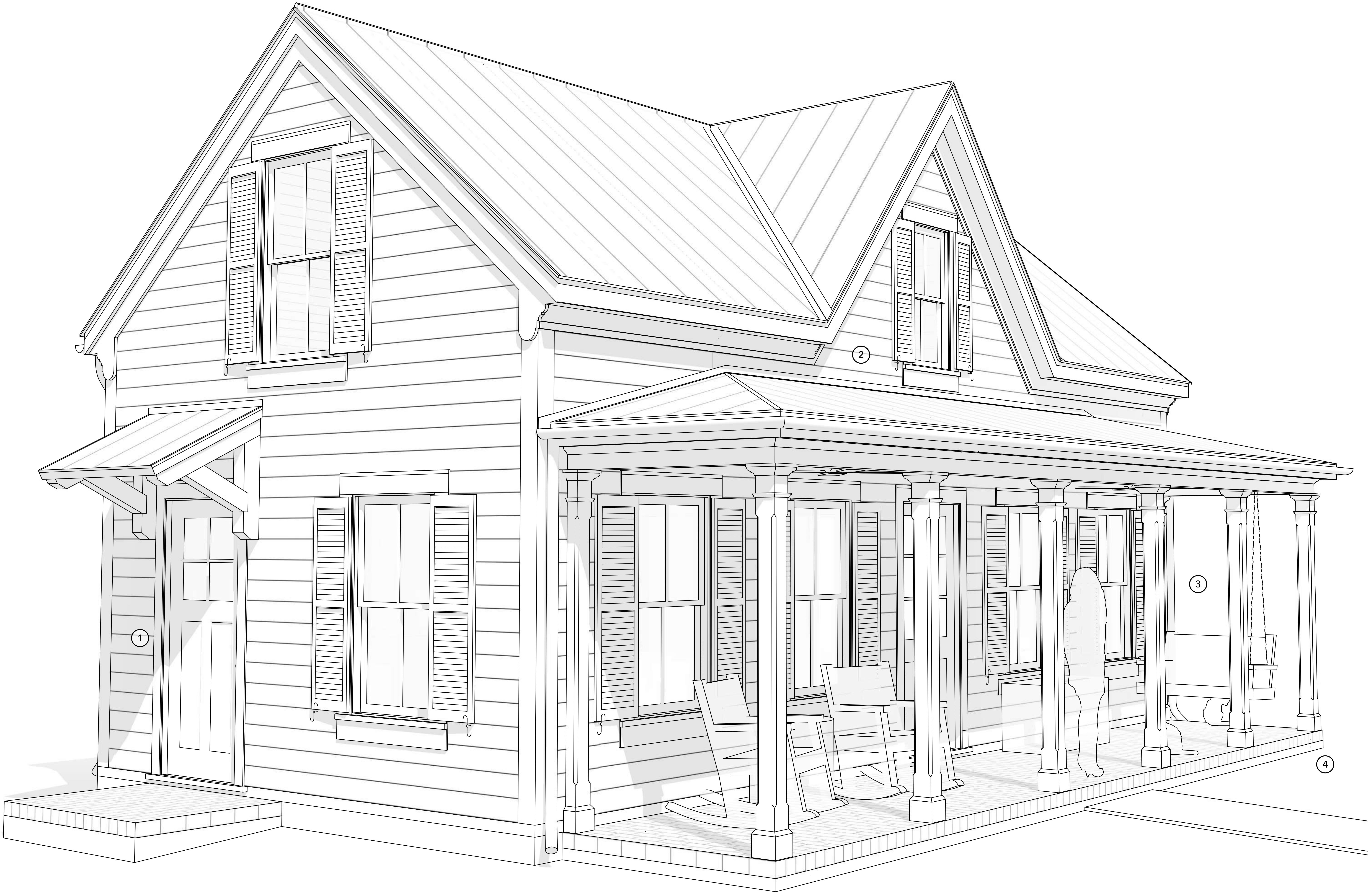
The Backyard Farmhouse is based on an iconic archetype from the 1800s— a house with 1.5 stories and a front-facing gable. Such designs were most common in northern climates because they were compact— with a minimal amount of interior volume— and therefore easier to heat in the winter. They also used space and material efficiently. Now their compact size can be especially useful for an Accessory Dwelling Unit (ADU).

BACKYARD FARMHOUSE

FRONT PERSPECTIVE 1

JAY OSBORNE

This is the large version of the Backyard Farmhouse. The design comes in three different sizes— measuring between 650 to 850 square feet for its primary massing— and can also have secondary masses, like a bedroom suite that may be built as a rear addition. This design is small enough to be situated in many places, and adaptable enough for many different uses. Please come in. Take a gander. Imagine yourself in this new old cottage.



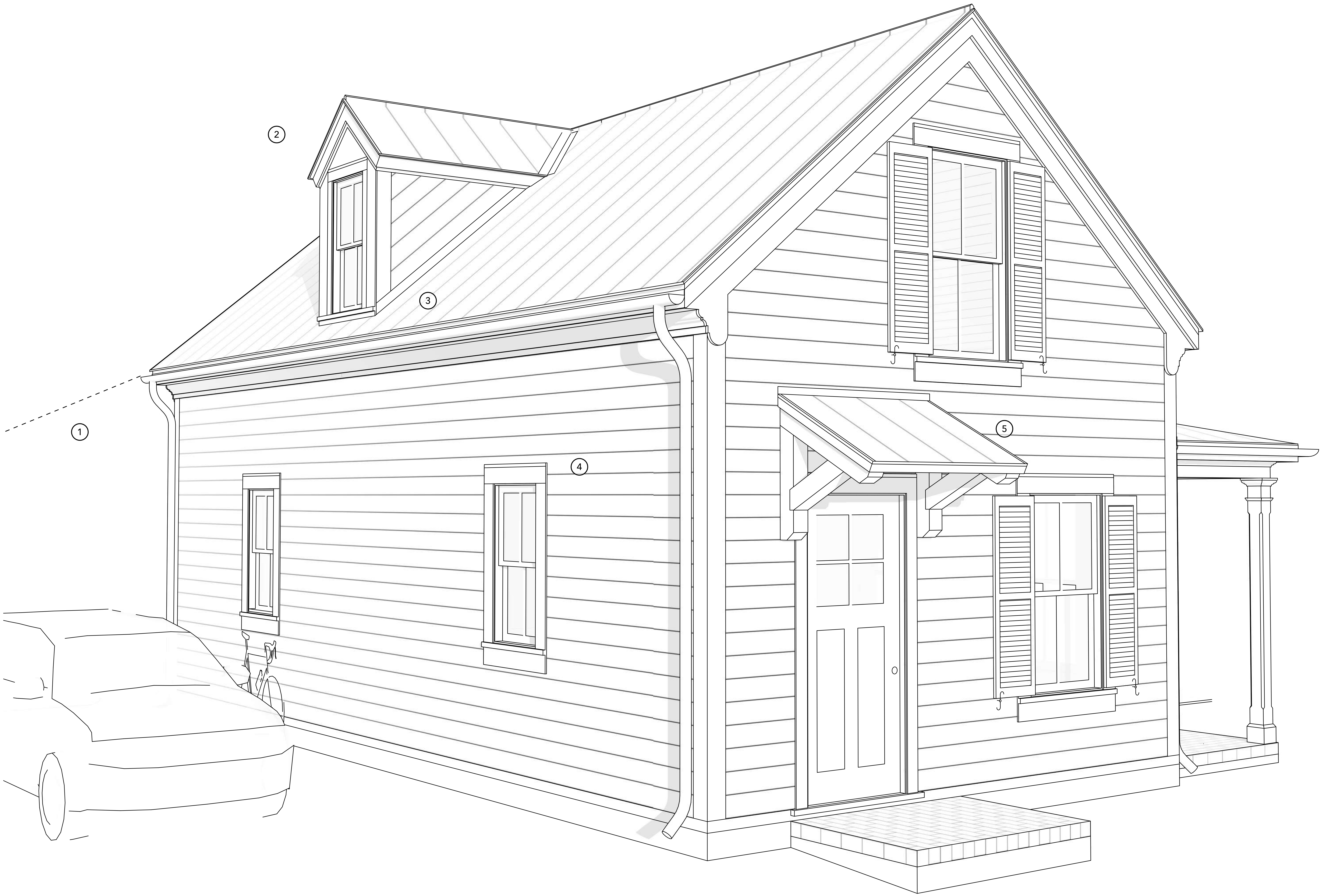
This little house is designed to be short and compact. Modern ADU ordinances often restrict the building height to a 20-foot maximum, and 16 feet at mid-slope. Almost every design decision relates to this common, severe height restriction. Adding just two feet in height can make the design dramatically more flexible, which would let you raise the ceilings, rearrange the bathroom, simplify the staircase, or add a crawlspace.

BACKYARD FARMHOUSE

FRONT PERSPECTIVE 2

JAY OSBORNE

(1) Most houses only need one egress door (by code), so this can be a window instead.
(2) The front gable is both iconic and practical. It allows enough space for the bathroom.
(3) To look traditional, the spaces between the posts should be vertically proportioned.
(4) A slab foundation is only used because of the severe height restriction. Because such houses are most common in northern climates, a basement would be more appropriate.



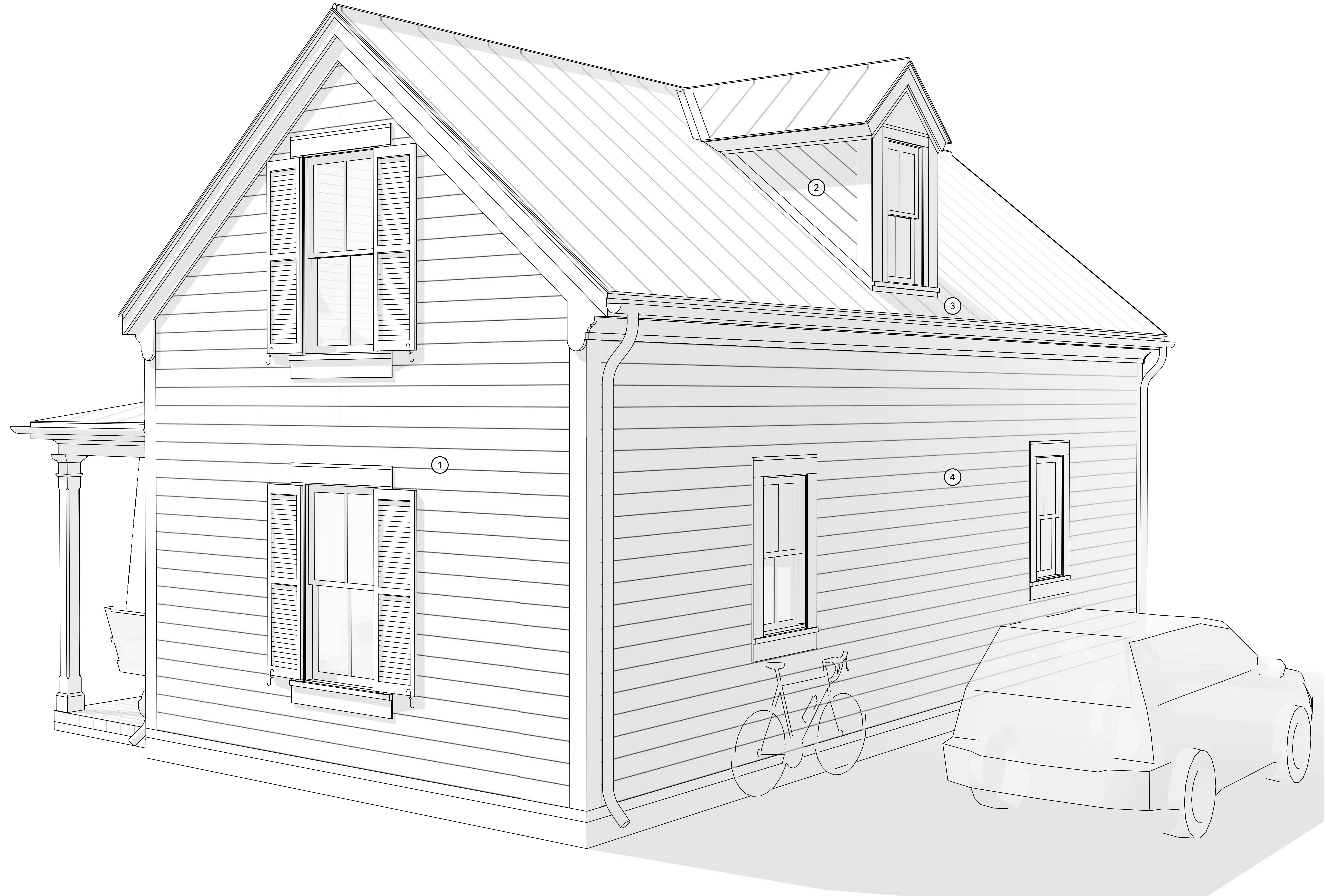
BACKYARD FARMHOUSE

BACK PERSPECTIVE 1

JAY OSBORNE

(1) The back of the house is informal and flexible. You can rearrange or eliminate the windows, or add a bedroom suite or garage. A 10x24 rear addition with a lean-to roof would be in scale with the rest of the house. Let the rear be used for service functions. **(2)** The dormer may be revised in future versions of this design— perhaps as a shed dormer (easier to build). The dormer naturally lights and ventilates the stairs and hall.

(3) Raising the dormer above the eave makes any future additions very straightforward. Lowering the window is possible, but it could conflict with the gutter. **(4)** The windows to the rear can be omitted. However, many small windows are better than a few big ones, significantly improving daylighting and cross breezes. **(5)** The side door has a small roof. If the front porch were on this side, the house could fit better on a narrow strip of land.



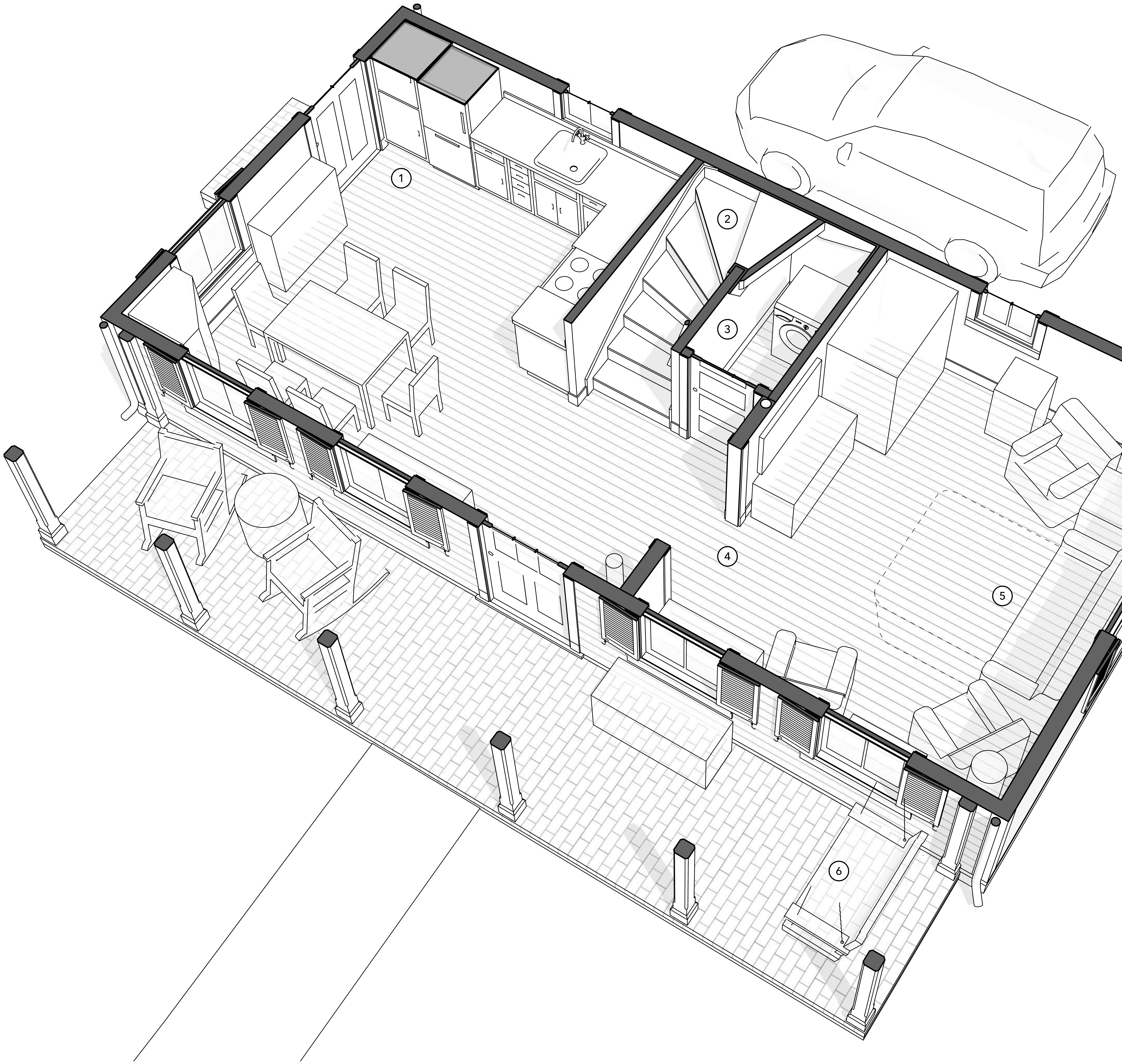
BACKYARD FARMHOUSE

BACK PERSPECTIVE 2

JAY OSBORNE

(1) For bedroom emergency egress, these upper windows can't be smaller (and also have old-time proportions). Other code requirements, like a 2' sill height, may also apply. **(2)** Making any changes will result in a cascade of new issues. This dormer is required for maintaining head room at the staircase. (A common old function of dormers.) **(3)** It is tempting to lower this window, but then it would be blocked by any future rear additions.

(4) A quick note: Do not use vinyl or aluminum siding. It's impossible to create good details using flimsy snap-in-place siding. All the edges and connections look wrong. I usually recommend fiber cement siding because it will probably last a century or two. It is fireproof, bug-proof, rot-resistant, dimensionally stable, and less expensive than good wood siding. Vinyl siding would make this house look like a cheap plastic toy.



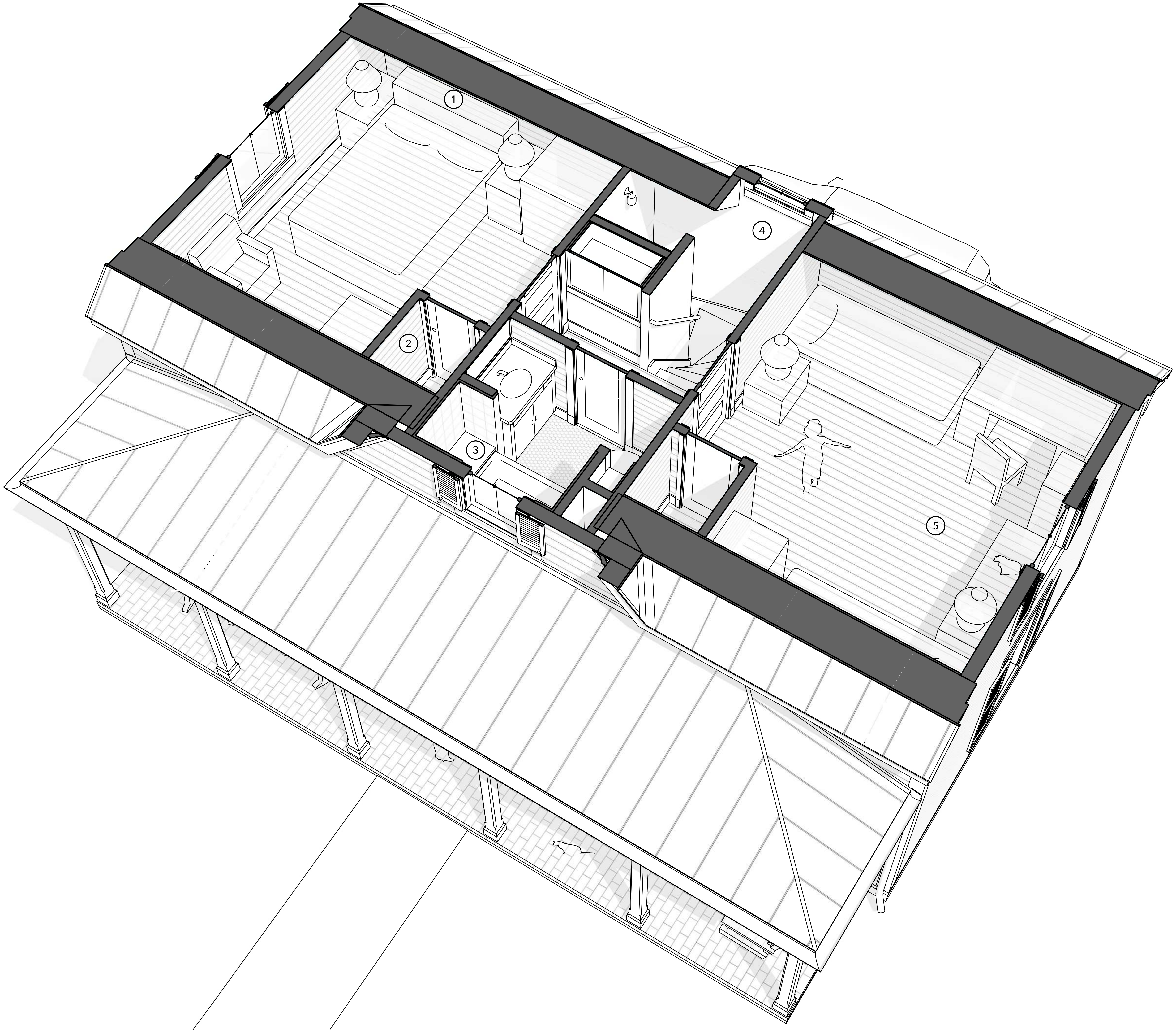
BACKYARD FARMHOUSE

FIRST FLOOR

JAY OSBORNE

(1) This large version of the Backyard Farmhouse has a conventionally-sized kitchen. The side door could connect to a mud room (would probably be 8x8 feet with a lean-to roof).
(2) The winder stairs are the most complex aspect of this house, and might be changed in future versions of this design. They could be considered a centerpiece of the design. If I change the staircase layout, the entire downstairs room layout will also need to change.

(3) To have the lower space be used for a utility closet (or else a staircase to a basement), the winder stairs are built somewhat unconventionally by today's standards. Yet such construction was common in the past. New code requirements make it hard to balance all the issues. **(4)** Pocket doors could be placed here, letting the living room be a guest bedroom. This thick wall also hosts a bathroom waste pipe. **(5)** A sofa bed could be here.



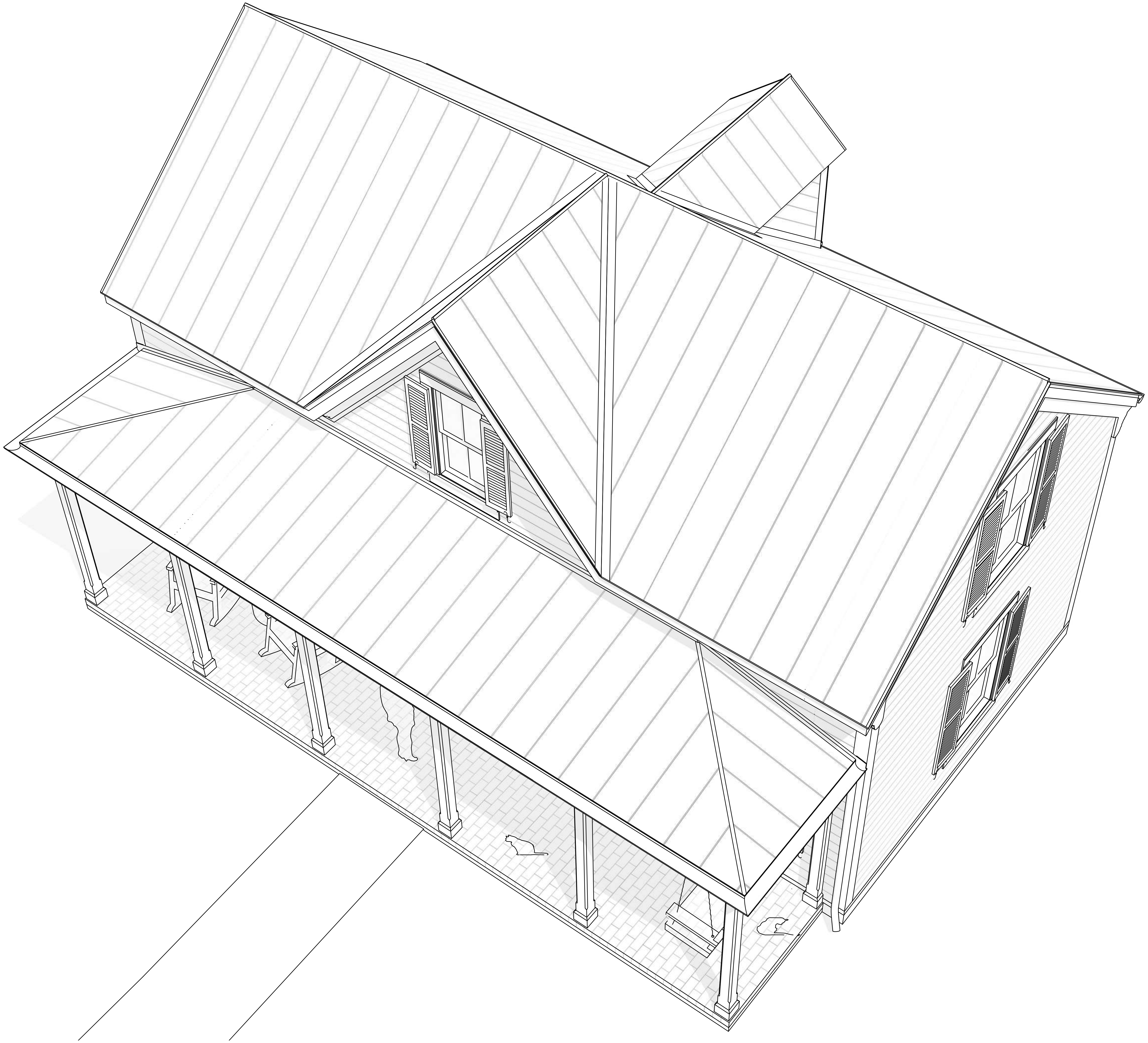
BACKYARD FARMHOUSE

SECOND FLOOR

JAY OSBORNE

(1) The vertical walls are 3 feet tall, before the ceiling slopes. This was common in the past, but in truth, 4 feet is much more comfortable. And the ceiling needs to be 5 feet high for any part of the room to technically qualify as floor area. These bedrooms are therefore quite big, despite being, technically, only 100 square feet. In the last version of this design, the outer walls were thickened. Now the rooms are given more volume.

(2) This large version also gives a closet to each bedroom. Though usually not required by law (contrary to popular belief), closets are now expected in bedrooms. **(3)** The low ceiling height severely limits the arrangement of the bathroom. A built-in seat is placed next to a small bathtub. **(4)** The dormer is needed for adequate staircase head clearance. **(5)** Though they may seem tiny, these bedrooms allow for many furniture configurations.



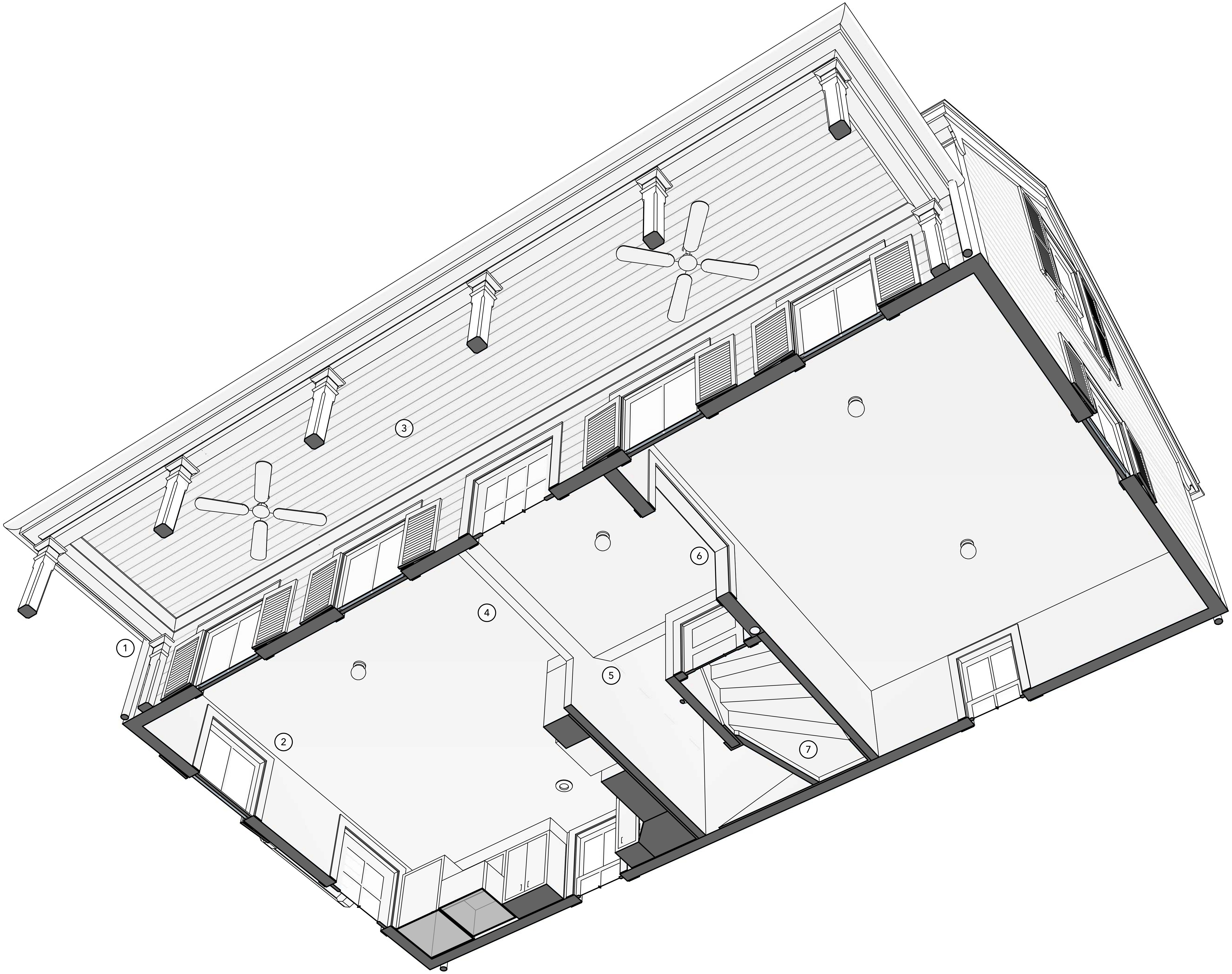
When designing a new old house, it helps to imagine the roof before considering the interior walls. Keeping the roof simple has many benefits— from initial construction costs to long-term waterproofing maintenance. This roof is not particularly simple to build (but it is significantly easier than McMansion roofs). Despite the challenge, this roof's shape is functional and deliberate— optimized for adequate head room despite minimal volume.

BACKYARD FARMHOUSE

THE ROOF

JAY OSBORNE

This design specifies standing seam roofing. It's one of the most durable types of roof, but also fairly expensive. To save costs, you can use 5V metal roofing. To splurge, use cedar shakes. The porch roof is steeper than it would have been historically (roof slopes used to be measured in units of 5, so porch roofs were often 1/5 (roughly 2.5/12). The main roof has historically common slopes. You might say this house is all about the roof.



BACKYARD FARMHOUSE

DOWNSTAIRS CEILING

JAY OSBORNE

(1) Pilasters match the posts, providing visible structure (a key theme in old architecture). Before engineers and building codes, houses were made to look stronger than needed—a psychological comfort —and possibly a builder's rebuttal in case of a structural collapse.

(2) The downstairs ceiling is about 7.5 feet high. Seven feet is allowed in the residential building code, but low ceilings make it hard to use historically proportioned windows.

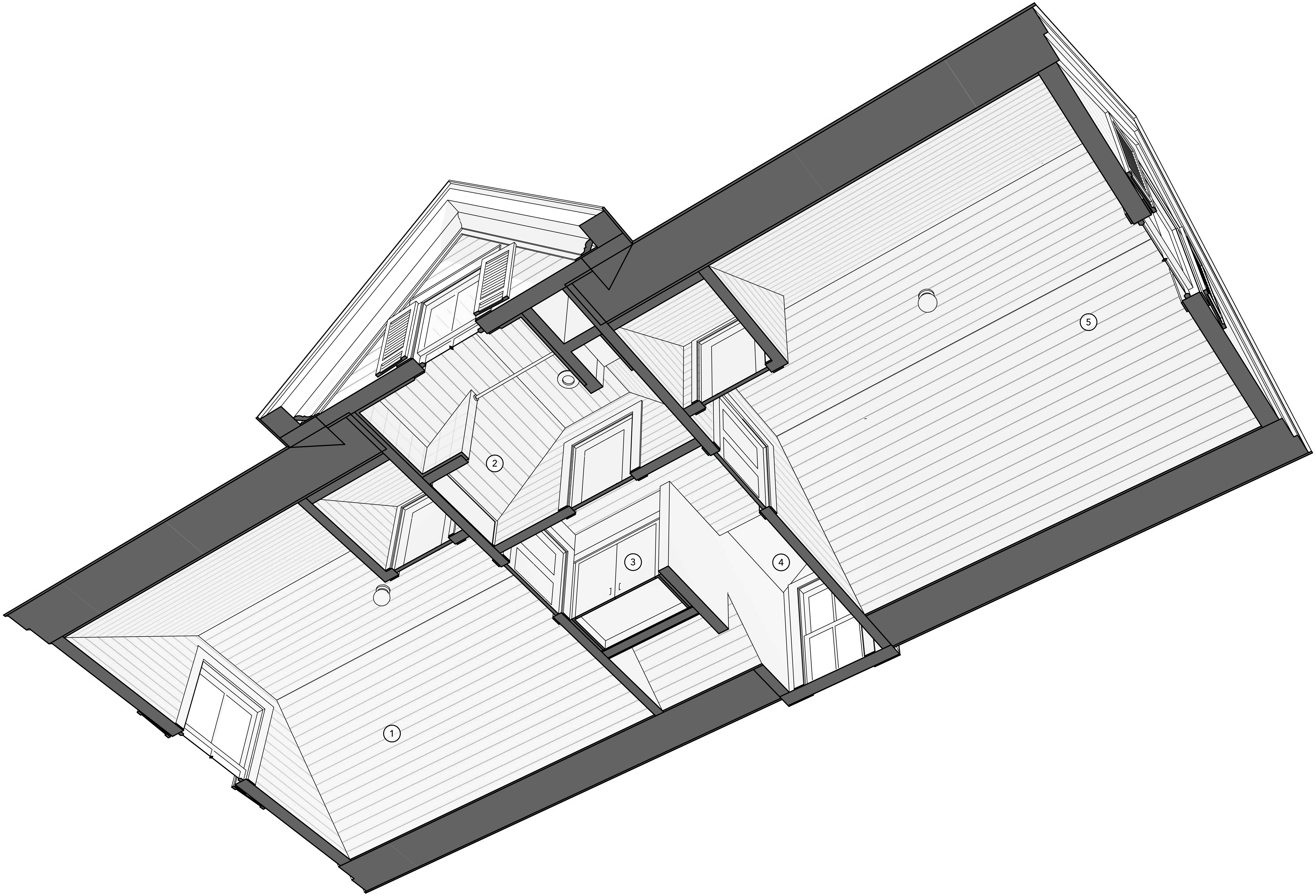
(3) Beadboard porch ceilings were traditionally painted "haint blue" in southern climates.

(4) To use 2x8 floor joists, a beam was included here. It also helps demarcate the spaces.

(5) Stairway head clearances are a hassle with low ceilings. So this chamfer is necessary.

(6) This wall can have doors. Wall surfaces give space for paintings and movie screens.

(7) The winder stairs are sheathed below, for fire protection at the utility closet's ceiling.



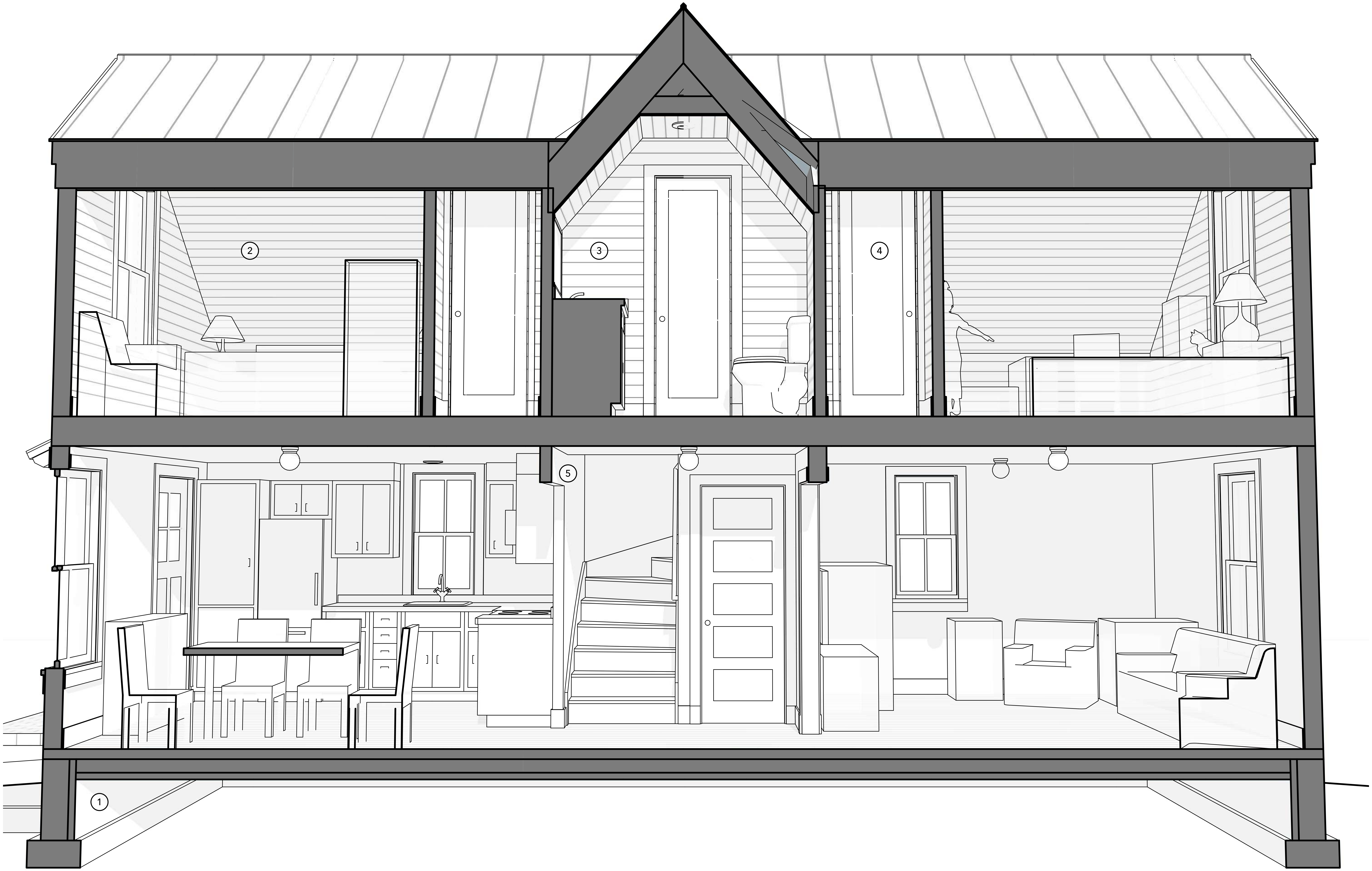
BACKYARD FARMHOUSE

UPSTAIRS CEILING

JAY OSBORNE

(1) The ceiling heights at this level are about as low as they can go. This design works with a 16-foot mid-roof height requirement (common for ADUs) and 20-foot max ridge height, as well as minimum head height requirements demanded by the building code. Doors, windows, and bathroom fixtures are hard to rearrange (without causing massive headaches, that is). If you like, raise all the ceilings by a foot. But don't dare lower them.

(2) The front gable provides just enough volume to add a small room (here, a bathroom).
(3) A linen cabinet fits at the upstairs hall, raised to avoid conflicts with stair head heights.
(4) The dormer is like a skylight, but provides stairway head room, and energy efficiency.
(5) Beadboard walls and ceilings are more pleasant to touch than drywall. Overall, these bedrooms will feel cozy and charming, like being in a light and airy cave, or a large tent.



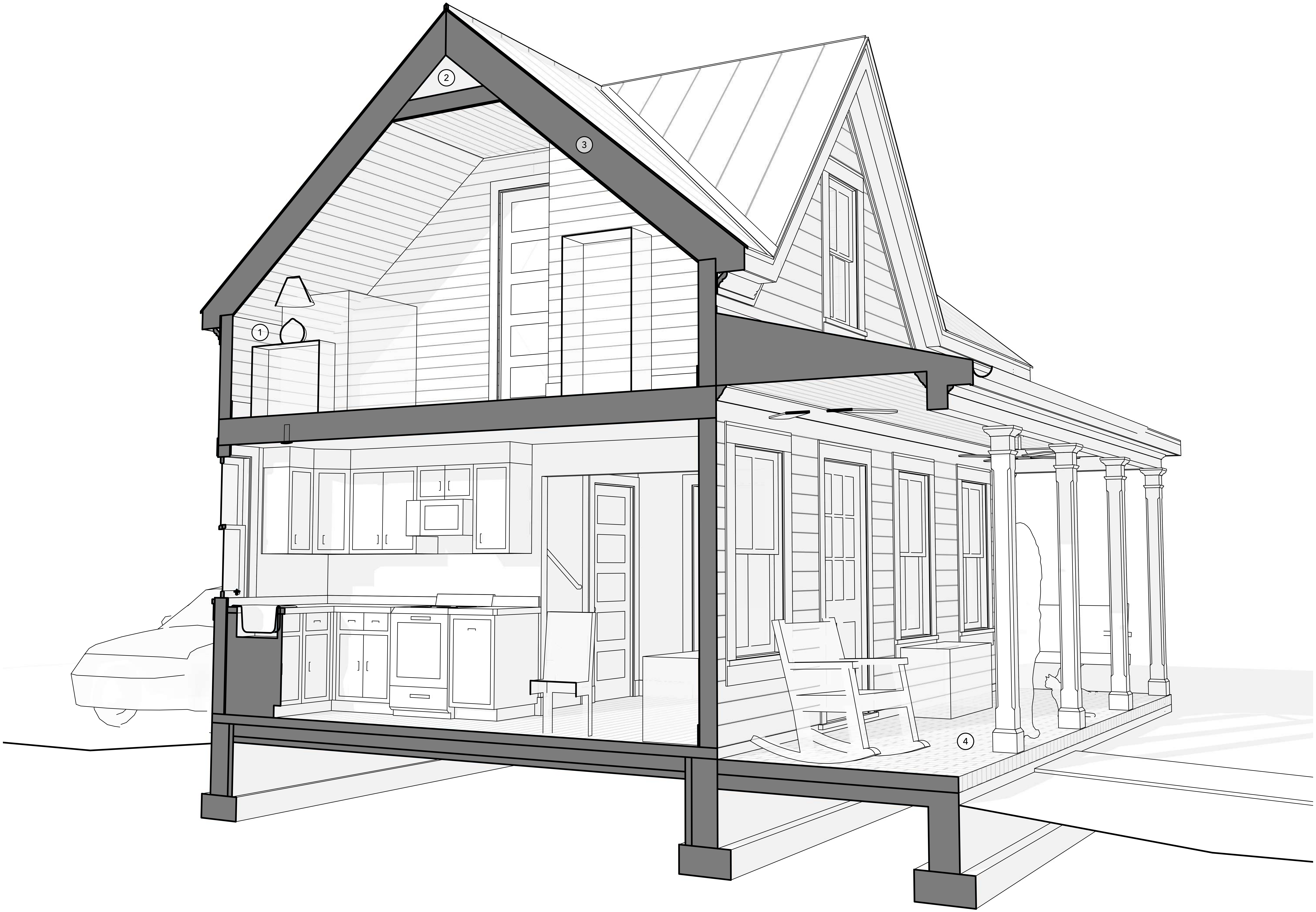
BACKYARD FARMHOUSE

LONG SECTION

JAY OSBORNE

(1) These upstairs rooms are very cozy, but also practical. Small homes are harder to show with renderings, for the same reason it's hard to photograph the interior of a car. **(2)** An insulated concrete slab is the best foundation system for a strict height limit. You can pick the foundation type that fits your site and situation. **(3)** Bathroom ceilings can be as low as 60" at the back of a sink or toilet, but generally 80" is the minimum height.

(4) The closet doors (and all the upstairs doors), need to be close to the roof ridge. (Yet another issue related to the height restrictions.) **(5)** By shortening the span, this beam allows for 2x8 joists. Bouncy floors shouldn't be an issue. The plumbers might not be as happy, but saving a couple of inches will matter with those overly-restrictive height limits. At this point, it makes sense to campaign for more reasonable ADU height restrictions.



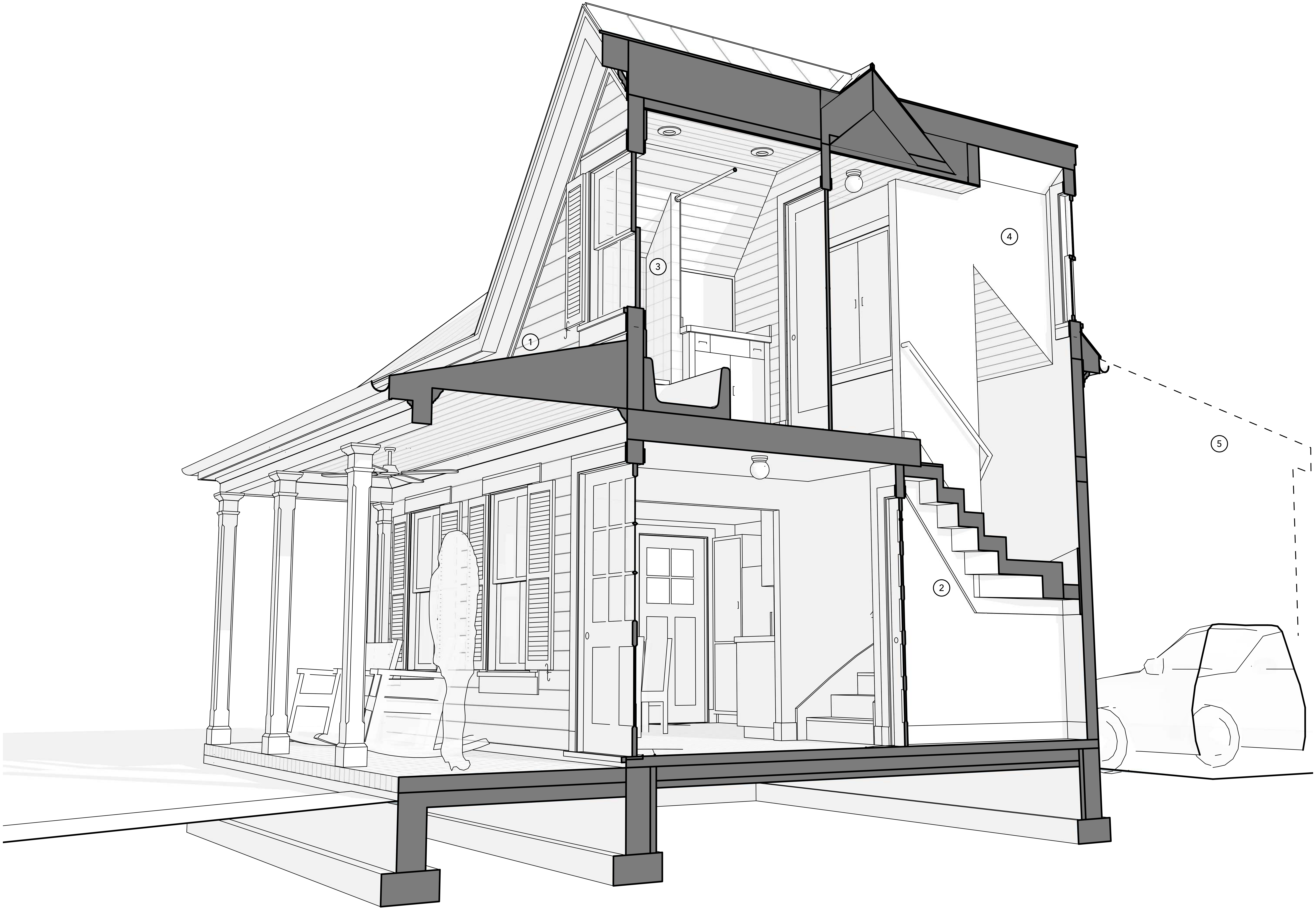
(1) The vertical walls at the upstairs bedrooms are 3' high, before the sloping ceiling. Although that is common in old 1.5-story houses, 4' is significantly more comfortable. In my previous iteration of the Backyard Farmhouse, I included extra walls at this point, but now I feel that it's better to simplify the design. You can build shelves, drawers, or closets at these low walls. Such customizations are best if individualized for your needs.

BACKYARD FARMHOUSE

TRANSVERSE SECTION 1

JAY OSBORNE

(2) This tiny space is for structure and a utility chase. You don't need an attic access hatch. **(3)** Ceilings need to be insulated more than any other part of a house. This section lets you pick from various construction assemblies, including 2x12 rafters with batt insulation. So you can pick the one that works best for your particular climate. **(4)** The porch is fairly large, but only about 5 feet deep— which is about as narrow as a functional porch can be.



BACKYARD FARMHOUSE

TRANSVERSE SECTION 2

JAY OSBORNE

(1) The top of the porch roof is close to the eave above it, but still allows some space for piling snow. Ice dams are one reason why, in old houses, there's often a vertical break from the main roof and porch roof. **(2)** The winder stairs are constructed as a series of staggered platforms, with gypsum wallboard below (so that the space under them can be a utility room). Straight stairs will not work in this design, but a spiral staircase might.

(3) It might not be ideal for a bathtub to be placed in front of a window, but the ceiling heights are so low that this is the only possible location. **(4)** The dormer is needed for head room at the staircase. The window can be lower, but then it would dip below the eave line, making it hard to build a rear addition in the future. **(5)** A 10x24 rear mass with a simple lean-to roof could have a carport, garage, bedroom suite, play room, or office.